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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/265,214	03/10/1999	BRUCE A. PHILLIPS	1552(USW-050	4266
22193	7590	05/04/2004	EXAMINER	
QWEST COMMUNICATIONS INTERNATIONAL INC LAW DEPT INTELLECTUAL PROPERTY GROUP 1801 CALIFORNIA STREET, SUITE 3800 DENVER, CO 80202			HYUN, SOON D	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 05/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/265,214

Applicant(s)

PHILLIPS ET AL.

Examiner

Soon-Dong Hyun

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Appeal Brief

1. In view of the appeal brief filed on 02/12/2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 7, 10, 12, 13, 15, 17, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bremer et al (U.S. Patent No. 6,580,785).

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Regarding claims 1, 4, 12, 13, and 15, Bremer et al discloses a broadband communication system utilizing xDSL technologies comprising:

an upstream xDSL modem (13 in FIG. 2) in a central office (11);

a twisted pair (27, 47) connected to the upstream xDSL modem;

a plurality of taps defined along the twisted pair (47);

a plurality of downstream xDSL modems (50), each downstream xDSL modem being in communication with corresponding tap of the plurality of taps, the upstream xDSL modem and the plurality of downstream xDSL modems providing packet-based (FIG. 6, col. 8, lines 11-17) point-to-multipoint communication (FIG. 8, col. 9, lines 22-39) between Bremer et al

Regarding claims 7 and 17, Bremer further teaches that the upstream xDSL modem and the plurality of downstream xDSL modems are connected to the Internet (24), i.e., they are in a packet-switched network.

Regarding claims 10 and 20, Bremer further teaches that the plurality of downstream xDSL modems are operative to transmit to the upstream xDSL modem in a time division multiplexing-based protocol (col. 2, lines 15-25).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 3, 5, 6, 9, 11, 14, 16, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer et al (U.S. Patent No. 6,580,785).

Regarding claims 2 and 16, Bremer et al (Bremer) does not explicitly teach that the modems are VDSL modems. However, the xDSL is a generic name applied for several types of digital subscriber line techniques, including the VDSL. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate VDSL modems for the upstream xDSL modem and the plurality of downstream xDSL modems of Bremer for higher bit rate communications.

Regarding claim 3, Bremer does not explicitly teach that the twisted pair is UTP. However, it will be apparent to those of skill in the art to use UTP for a local loop due to its flexibility for wiring and lower cost. Therefore, it would have been obvious to one having ordinary skill in the art to use UTP.

Regarding claims 5 and 6, Bremer does not explicitly teach that the twisted pair is a Category 3 or Category 5. However, it will be apparent to those of skill in the art to use a Category 3 or Category 5 according to a data rate supported. Therefore, it would have been

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obvious to one having ordinary skill in the art to use Category 3 or Category 5 twisted pair for higher data rate.

Regarding claims 9 and 19, Bremer does not teach a specific access control protocol for the system, but an access protocol is inherently required for upstream transmission from the plurality of downstream xDSL modems, because the twisted pair is shared by the plurality of downstream xDSL modems and thus, the plurality of downstream xDSL modems should have a rule to access to the central xDSL modem. This is an Official Notice that a contention-based access protocol is a basic access protocol and well known in the art. Therefore, it would have been obvious to one having ordinary skill to adopt a contention-based protocol into Bremer for the access.

Regarding claims 11 and 21, Bremer does not explicitly teach that the upstream xDSL modem is operative to transmit to the plurality of downstream xDSL modems in a broadcast-based protocol. However, Bremer teaches a digital TV (56) connected to a downstream xDSL modem to receive a TV program. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the broadcast-based protocol into Bremer to broadcast a TV program from the upstream modem to the plurality of TVs.

Regarding claim 14, Bremer does not teach that the upstream xDSL modem is located outside the central office. Those of skill in the art would have been motivated to locate the upstream xDSL modem outside the central office, i.e., nearer location to the plurality of downstream xDSL modems, for a higher bandwidth and a plurality of the upstream xDSL modems clustered are connected to the central office via a fiber optic cable. Therefore, it would have been obvious to one having ordinary skill in the art to locate the upstream xDSL modem

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outside the central office and connect the upstream xDSL modem to the central office via a fiber optic cable.

7. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bremer et al (U.S. Patent No. 6,580,785) in view of McHale et al (U.S. Patent No. 6,282,273).

Refer to the discussion for the claims 1 and 15, above. However, Bremer does not teach that the upstream xDSL modem and the plurality of downstream xDSL modems are in a cell-switched network. McHale et al (McHale) teaches that ATM (a cell-switched network) is used for xDSL system (col. 5, lines 9-25). Those of skill in the art would have been motivated by Mchale to use ATM for the packet-switched network of Bremer to take advantage of using ATM. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate ATM into Bremer.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon-Dong Hyun whose telephone number is (703) 305-4550. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

9. Any response to this action should be mailed to:

Commissioner for Patents

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P.O. Box 1450

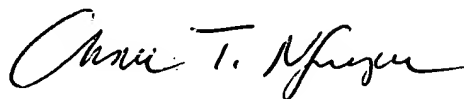
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Or faxed to: 703-872-9306 for formal communications intended for entry with a label of
"OFFICIAL" and for informal or draft communications with a label of "PROPOSED" or
"DRAFT" (attn: Art Unit 2663, Soon-Dong Hyun).



S. Hyun

04/27/2004



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